

REMARKS

The examiner cites O’Nion (4,876,978) for “mooring a vessel (12) at sea to a body (1)”. Applicants contend that item 12 is a mooring buoy or a rigid column to which a vessel 1 is connected via a yoke 3. Yoke 3 of O’Nion is pivoted at the vessel 2 for mooring the vessel 2 to the buoy 12.

Applicants’ arrangement, as defined by Claim 1 provides a yoke pivoted at the mooring body (e.g., a FPSO process vessel in the preferred embodiment, but not limited to a floating body) with the end of the yoke disconnectably connectable to a vessel. That is the opposite arrangement disclosed by O’Nion.

In a nut shell, Applicants’ arrangement of Claim 1 provides a yoke pivoted about a horizontal axis at a mooring body, such as a FPSO or a column or a buoy and connects its other end to the vessel to be moored. O’Nion does not disclose or suggest such an arrangement. Applicants moor a vessel 2 to a body 1 with a yoke pivoted at the body. O’Nion moors a vessel 1 to a body 12 with a yoke pivoted at the vessel.

Furthermore, in a § 103 obviousness analysis, the examiner alleges that Hasebe’s locking mechanism (e.g., Figure 3 of Hasebe could be added to lock O’Nion’s pin 9 to sleeve 14). Applicants maintain that such a combination would not be made by a routineer in the art of mooring technology, because Hasebe’s locking mechanism is on the pin 38 of a universal joint (pin 31 rotates about arm 27; arm 27 rotates with link 26 about shaft 24). But O’Nion’s pin 9 is already mounted as a universal joint: crown 8 rotates about ring 6; ring 6 pivots about shaft 7. Thus, there would be no motivation to lock rod 9 with pins of a universal joint such as those of Hasebe, because O’Nion already has a universal joint, and that universal joint (8, 6, 7) could not be used to lock pin 9 to sleeve 14 of O’Nion. Accordingly, it is respectfully submitted that Claim 1 is patentably distinct over O’Nion in view of Hasebe for

the two reasons presented above. The allowance of Claims 1, 2 and 4 is respectfully requested in view of the two reasons described above.

The arrangement of Claim 4, dependent on Claim 1, provides a pivotable connection for the yoke at the mooring body (e.g., FPSO 1) and a disconnectable connection to the vessel (e.g., carrier vessel 2) to be moored at the second end of the yoke. Claim 3 provides an added buoyant element to the end of the yoke at which a vessel is mounted to a body. d’Hautefeuille provides a buoy at the non-pivotable end of the yoke, but no disconnectable system is described. Applicants Claim 4 is therefore unobvious, because there is no art cited that provides a buoyant element to keep the disconnectable end of a yoke afloat when a vessel is not connected to it. d’Hautefeuille’s buoy 9 is provided not to keep yoke 2 afloat after disconnection (because there is no disconnection described), but rather to optimize return forces of the mooring system when the moored vessel 1 moves away from buoy 5.

Claim 11 has been amended to change “guide” at the seventh line of the claim to --pull-in--. The term “windlass” in the 14th line has been changed to --winching mechanism--. Proper antecedent basis for “winching mechanism” is now provided by reference to that term in line 6.

Applicants gratefully acknowledge the allowance of Claims 11-14 and the presence of allowable subject matter in Claims 5-10, 18, 20 and 21.

Independent Claim 15 is similar to dependent Claim 3 above and is patentably distinct over O’Nion in view of Hasebe and d’Hautefeuille for the reasons described above with respect to Claim 3. Allowance of Claim 15 and dependent Claims 16 and 17 is respectfully requested.

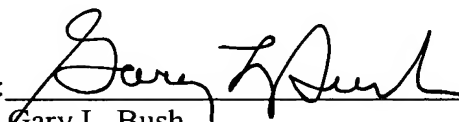
The examiner refers to the buoy 1 of O’Nion as being a vessel in the rejection of Claims 15-17 and 18. Applicants disagree with such characterization. O’Nion refers to a floating column at col. 4, lines 6-12. O’Nion indicates that the floating column is moored at

its lower end by anchor chains. Alternatively, O’Nion indicates that “body” 12 can be a rigid column. But it is respectfully submitted that neither a floating column nor a fixed column can be characterized as a “vessel.” A vessel is defined in *The American Collegiate Dictionary* as “a craft for traveling on water, now especially one larger than an ordinary rowboat; a ship or boat.” O’Nion’s “floating column” does not meet that definition. Accordingly, O’Nion or the other references in the application do not show two vessels disconnectably moored to one another by a yoke.

Summing up, all the claims as amended herein satisfy the patent statutes as to clarity, novelty, and unobvious for the reasons presented above.

Allowance of all the claims and passage to issue are respectfully requested.

Respectfully submitted,

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